

WHAT IS CLAIMED IS:

1. A laser interferometer displacement measuring system, comprising a laser light source, an interferometer for dividing laser light of wavelength λ emitted from said laser light source into a reference path beam and a measurement path beam to interfere said reference path beam with the measurement path beam having been reflected from a subject body, and a light detector for detecting the light subjected to the interference in said interferometer, in which a variation in length of an optical path of the measurement path beam caused by a movement of the subject body is n (a natural number) times a displacement of the subject body,

said laser interferometer displacement measuring system further comprising means for suppressing a relative peak intensity, with respect to a baseline of a frequency spectrum, of a peak of frequency component $f = Nv / \lambda$ (N is a natural number of 1 to $2n$ and not equal to n) of a signal indicative of the amount of received light, the signal being generated in said light detector due to a movement of said subject body at speed v .

2. A laser interferometer displacement measuring system, comprising a laser light source, an interferometer for dividing laser light of wavelength λ emitted from said laser light source into a reference path beam and a measurement path beam to interfere said reference path beam with the measurement path beam having been reflected from a subject body, and a light detector for detecting the light subjected to the interference in said interferometer, in which a variation in length of an optical path of the measurement path beam caused by a movement of the subject body is n (a natural number) times a displacement of the subject body,

said laser interferometer displacement measuring system wherein
a relative peak intensity, with respect to a baseline of a frequency
spectrum, of a peak of frequency component $f = Nv / \lambda$ (N is a natural number
of 1 to $2n$ and not equal to n) of a signal indicative of the amount of received
light, the signal being generated in said light detector due to a movement of
said subject body at speed v , is suppressed for output relative to said signal
indicative of the amount of received light in a frequency spectrum of a signal
of a measurement value.